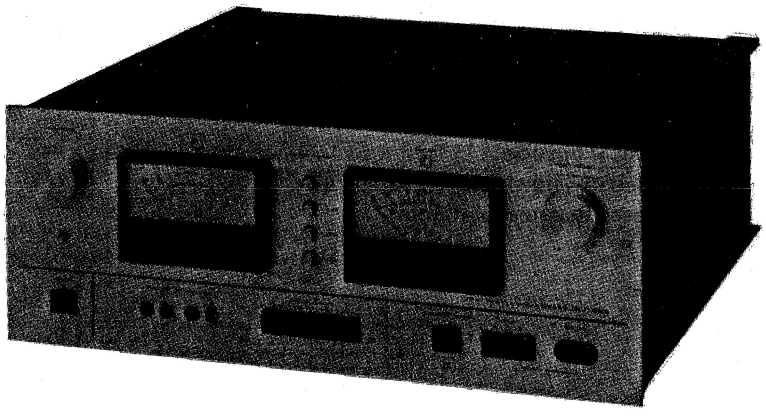
SANYO

SANYO
STEREO POWER AMPLIFIER
DCP 3001 SEV
SERVICE MANUAL



SPECIFICATIONS

Continuous Power Output:	
Amplifier load at 4 ohms	300W/300W
8 ohms	180W/180W
(1 kHz, each channel driven)	
Amplifier load at 4 ohms	250W/250W
8 ohms	150W/150W
(1 kHz, both channel driven)	
Total Harmonic Distortion:	Less than 0.1% (at rated power)
	Less than 0.02% (at power 1W/ch)
Intermodulation distortion:	Less than 0.2% (at rated power)
	Less than 0.5% (at power 1W/ch)
Power Bandwidth:	10 - 50 kHz (at 0.1% T.H.D.)
(IHF both channel driven)	
Frequency Response:	
(1W/ch, +0 dB — -1 dB)	15 - 100 kHz
Input Sensitivity/Impedance:	1.2V/30kohms
Output Terminal/Matching Imp.	
Speaker A, B, C, A+C	4 to 16 ohms
Damping Factor:	More than 80 (1 kHz, 8 ohms)
Signal to Noise Ratio:	More than 105 dB (IHF, short circuit A network)
Residual Hum and Noise:	Less than 0.2 mV (8 ohms)
Srew Rate:	60 V/μs
Subsonic Filter:	16 Hz (12 dB/oct.)
MISCHELLANEOUS	
Power requirements:	110, 220V, 50/60 Hz
AC Outlets:	Switchable: One 150 Watts
	Unswitchable: One 200 Watts
Dimensions:	510W x 510D x 290H

ADJUSTMENT OF THE MAIN AMP P.C. BOARD

BEFORE ADJUSTMENT

1. Pull out the PRE OUT/MAIN IN connector.
2. After the power switch is turned ON, wait a few minutes before adjustment, to be sure of the most stable operation.
3. Connect dummy load resistors (8 Ω) to the speaker terminals.
4. Tool to be provided.
   Electronic Voltmeter, or DC V.T.V.M. or Circuit Tester (Input impedance: More than 30 kΩ/V)

(A) MID-POINT POTENTIAL ADJUSTMENT

Set the voltage between the speaker terminal and ground (Chassis) to 0V ± 0.01V with (VR 01)

(B) IDLING CURRENT ADJUSTMENT

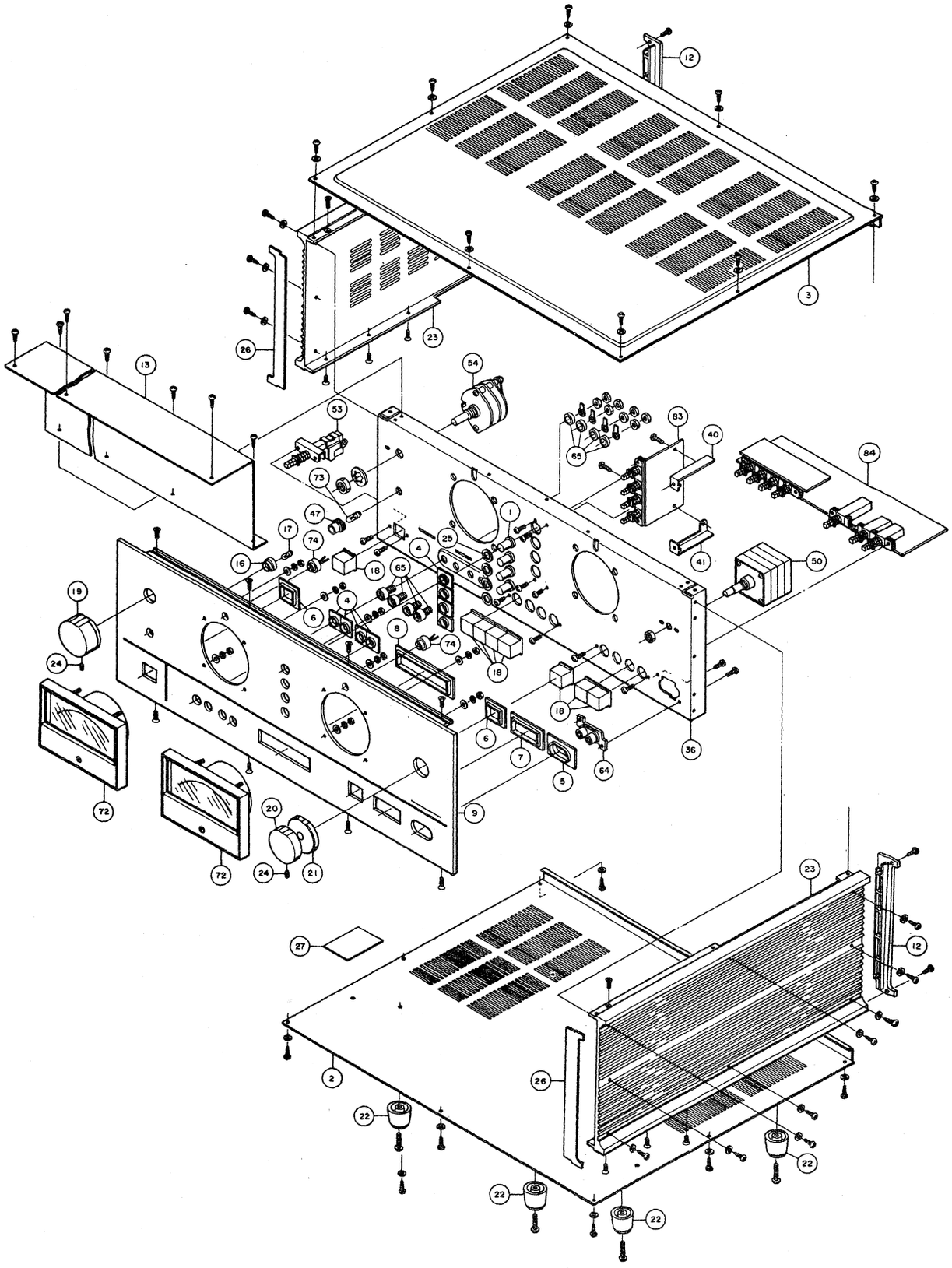
Turn the (VR 02) so that the idling current may become 100 mA. . . . . .Measure the voltage of the both sides of the (R13, R14) resistor (0.1 Ω) and set the (VR 02) so that the value may become 0.01V ± 0.001V.

Note : Polarity... . . . . Emitter of the (Q,01 ~ 06) . . . . . (+)
Mid-point . . . . . .(-)

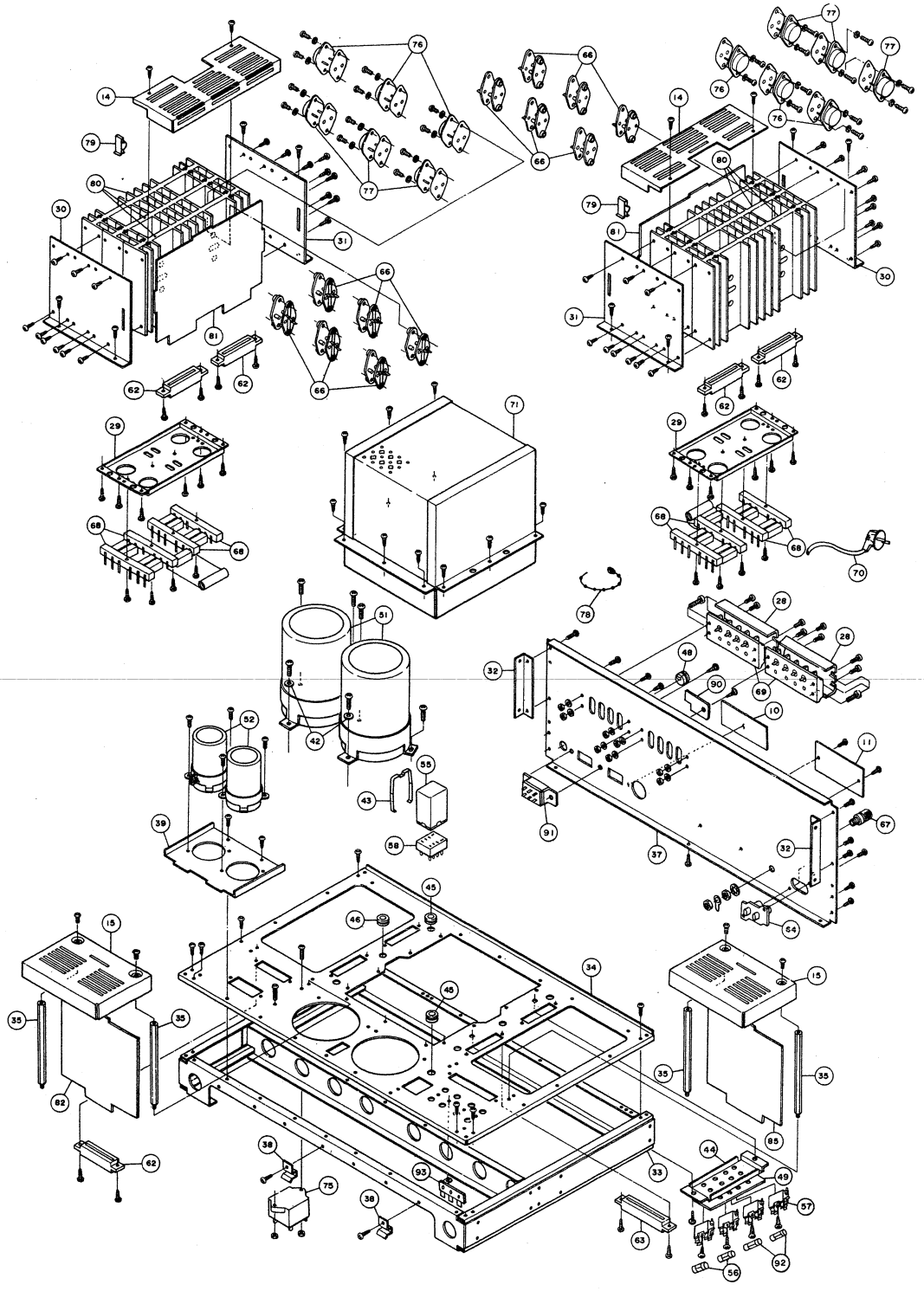
(C) Repeat seps A B no further improvement is possible.

Note : a. Turn the semi-fixed variable resistor slowly during adjustment.
b. Be careful of the polarity of each measurement point.

EXPLODED VIEW (CABINET)



EXPLODED VIEW (CHASSIS)



PARTS LIST

Ref. No.	Part No.	Description	Q'ty
PACKING			
	131 6 1139 53004	Box corrugate-exp	1
	131 6 2119 01361	Bag polyethylene-exp	1
	131 6 3009 19850	Pad	1
	131 6 3009 19930	Pad, Right, Left	2
	131 6 4559 10700	Manufacturing NO	3
APPEARANCE			
1	131 0 1001 30800	Knob assy, Meter range	4
2	131 2 1105 14901	Plate bottom	1
3	131 2 1106 10702	Plate top	1
4	131 2 1116 13200	Frame, Meter range, SP out	8
5	131 2 1116 13400	Frame, Input terminal	1
6	131 2 1116 13500	Frame, Power SW, SSF filter	2
7	131 2 1116 13600	Frame, Input AB SW	1
8	131 2 1116 13800	Frame, Power limiter SW	1
9	131 2 1209 31001	Panel control	1
11	131 2 1310 21827	Name plate	1
12	131 2 1311 34500	Sash	2
13	131 2 1410 12800	Cover, Panel front	1
14	131 2 1410 13000	Cover, Main PCB	2
15	131 2 1410 13100	Cover, Power and protector	2
16	131 2 1501 10400	Cover, Power sign	1
17	131 2 1504 10902	Plate, Power sign lamp	1
18	131 2 1601 33800	Knob, Push SW	8
19	131 2 1601 34100	Knob, Speaker selector	1
20	131 2 1601 34200	Knob, Input level	1
21	131 2 1601 34300	Knob, Input level	1
22	131 2 1801 13100	Leg	4
23	131 2 3315 10200	Panel side	2
24	131 2 4201 14600	Screw, Rotary knob	2
	131 2 4203 16600	Washer	23
25	131 2 5203 23100	Felt, Push SW knob	4
26	131 2 5205 14500	Cushion	2
27	131 2 6107 19000	Plate sever	1
28	131 2 6108 11400	Cover sever	2
	131 2 7103 19800	Label, Plate bottom	1
	131 2 7103 19900	Caution label, Plate top	1
CHASSIS			
10	131 2 1110 17900	Plate decorate	1
29	131 2 3101 27600	Metal mount, Heat sink	2
30	131 2 3101 28700	Metal mount, Heat sink	2
31	131 2 3101 28701	Metal mount, Heat sink	2
44	131 2 3101 37500	Metal mount fuse holder	1
32	131 2 3202 11800	Metal, Reinf	2
33	131 2 3301 20700	Chassis	1
34	131 2 3301 20800	Chassis	1
35	131 2 3303 13000	Pole	4
36	131 2 3305 18000	Panel, front	1
37	131 2 3306 18604	Panel, rear	1
38	131 2 3310 13100	Metal, Support	2
39	131 2 3605 10500	Metal mount capacitor	1
40	131 2 3614 16700	Metal mount PCB	1
41	131 2 3614 16701	Metal mount PCB	1
43	131 2 5107 00100	Cramper electrical part	1
45	131 2 6111 10300	Bushing	2
46	131 2 6111 11200	Bushing	2
47	131 2 6111 14000	Bushing, Power ind.	1
48	131 2 6111 14300	Bushing, AC cord	1
49	131 2 7103 24000	Label fuse	1
90	131 2 7104 00500	Plate pad switch	1
42	131 2 4203 83204	Washer 3.2x10x0.8	2

Ref. No.	Part No.	Description	Q'ty
ELECTRICAL PARTS			
50	4 2229 24480	Variable resistor	1
C51	4 2239 20742	Filter condenser 4000MF 70WV C10	1
C51	4 2239 20743	Filter condenser 4000MF 70WV C11	1
52	4 2239 20750	Electrolytic cap 2200MF 70V	2
91	4 2319 21530	Switch	1
53	4 2319 33811	Switch power	1
54	4 2319 33820	Rotary SP	1
55	4 2329 20060	Relay	1
56	4 2349 20250	Fuse 2A	2
57	4 2359 21021	Fuse holder	4
58	4 2359 21360	8P socket, Relay	1
62	4 2359 22090	Connector 10P	5
63	4 2359 22100	Connector 14P	1
64	4 2359 22130	RCA pinjack 2P	2
65	4 2359 22160	Jack SP	4
66	4 2359 22170	Socket transistor	12
93	4 2379 20141	Terminal 1-2P	1
	4 2379 20250	Terminal 1-1PL, Relay earth	1
67	4 2379 21060	Terminal G	1
68	4 2379 21420	Terminal lug 6P	8
69	4 2379 21430	Terminal SP	2
70	4 2439 20590	Power cord	1
71	4 2519 23292	Power trans	1
	4 2539 20220	Choke coil	2
72	4 5119 20440	Meter VU	2
73	4 6129 20214	Pilot lamp, 80 mA	1
74	4 6129 20480	Led assy	2
C02,03, 04,05	C2DNRM473C--	PP CON 0.047MF 200V ±20%	4
C01	C2EHRM103A--	MP CON 0.01MF 250V ±20%	1
D02	DCC-10D1-----	Diode 10D1	1
75	DCC-6B40-----	Diode bridge	1
R20,21	R2HDPJ103A	Carbon 10K ohm 1/2W ±5%	2
R13,14, 15,16	R3HEPK0R1A	Cemen 0.1 ohm 5W ±10%	4
R17,18	R3HEPK100A	Cemen 10 ohm 5W ±10%	2
R19	R3REPK102A	Cemen 1K ohm 7W ±10%	1
78	131 2 3608 11301	Cramp wire	35
92	4 2349 29999	Fuse 12A	2
79	131 2 5104 10700	Spring plate	2
80	131 2 6201 20800	Fin, Power transistor	6
R01,02, 03,04 05,06, 07,08 09,10, 11,12	R3HEPKR47A	Cemen 0.47 ohm 5W ±10%	12
Q07,08, 09,10 11,12	TNN-2SB539--Q	Power transistor 2SB539	6
Q01,02, 03,04 05,06	TNN-2SD287--K	Power transistor 2SD287	6

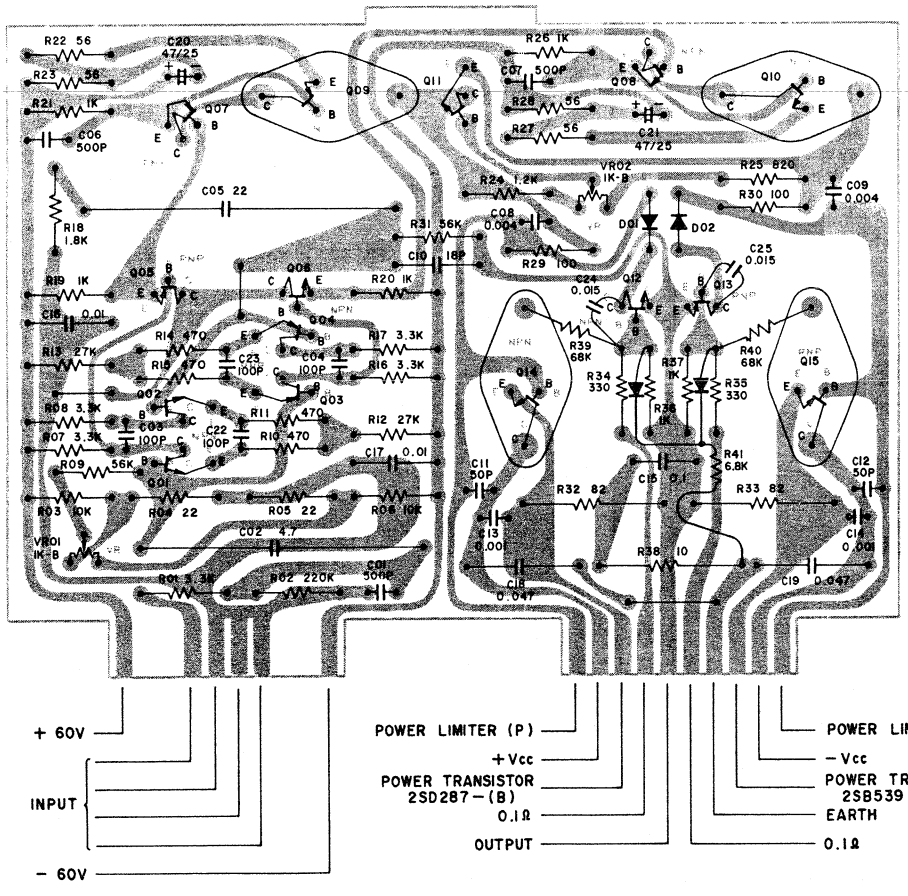
NOTES: 1. Part orders must contain Model Number, Part Number and Description.
2. Ordering quantity of screws and/or resistors must be multiple of 10 pcs.

PARTS LIST

Ref. No.	Part No.	Description	Q'ty
MAIN AMP ASSY			
81	131 0 4001 61700	Main Amp PCB assy	2
	4 2229 24470	Variable resistor	2
C20,21	C1ERB-476A--	Elect 47MF 25V	2
C05	C1HATN226A--	Elect 22MF 50V ±30%	1
C10	C1HCDK180SL-	Ceramic 18PF 50V ±10%	1
C03,04, 22,23	C1HCSK101SL-	Ceramic 100PF 50V ±10%	4
C11,12	C1HCSK500SL-	Ceramic 50PF 50V ±10%	2
C13,14	C1HFRM102A--	Mylar 0.001MF 50V ±20%	2
C15	C1HFRM104A--	Mylar 0.1MF 50V ±20%	1
C24,25	C1HFRM153A--	Mylar 0.015MF 50V ±20%	2
C08,09	C1HFRM402A--	Mylar 0.004MF 50V ±20%	2
C02	C1HFTK475B--	Mylar 4.7MF 50V ±10%	1
C01,06, 07	C1HYSM501R--	Ceramic 500PF 50V ±20%	3
C16,17	C2DNRM103C--	PP 0.01MF 200V ±20%	2
C18,19	C2DNRM473C--	PP 0.047MF 200V ±20%	2
R41	R2EDPJ682A	Carbon 6.8K ohm 1/4W ±5%	1
R39,40	R2EDPJ683A	Carbon 68K ohm 1/4W ±5%	2
R29,30	R2HDPJ101A	Carbon 100 ohm 1/2W ±5%	2
R19,20, 21,26 36,37	R2HDPJ102A	Carbon 1K ohm 1/2W ±5%	6
R03,06	R2HDPJ103A	Carbon 10K ohm 1/2W ±5%	2
R24	R2HDPJ122A	Carbon 1.2K ohm 1/2W ±5%	1
R18	R2HDPJ182A	Carbon 1.8K ohm 1/2W ±5%	1
R04,05	R2HDPJ220A	Carbon 22 ohm 1/2W ±5%	2
R02	R2HDPJ224A	Carbon 220K ohm 1/2W ±5%	1

Ref. No.	Part No.	Description	Q'ty
MAIN AMP ASSY			
R12,13	R2HDPJ273A	Carbon 27K ohm 1/2W ±5%	2
R34,35	R2HDPJ331A	Carbon 330 ohm 1/2W ±5%	2
R01,07, 08,16 17	R2HDPJ332A	Carbon 3.3K ohm 1/2W ±5%	5
R10,11, 14,15	R2HDPJ471A	Carbon 470 ohm 1/2W ±5%	4
R22,23, 27,28	R2HDPJ560A	Carbon 56 ohm 1/2W ±5%	4
R09,31	R2HDPJ563A	Carbon 56K ohm 1/2W ±5%	2
R25	R2HDPJ821A	Carbon 820 ohm 1/2W ±5%	1
R38	R3HEPK100A	Cemen 10 ohm 5W ±10%	1
R32,33	R3HEPK820A	Cemen 82 ohm 5W ±10%	2
Q03,04	TMM-2SA726S-F	Transistor 2SA726	2
Q01,02	TMM-2SC1313SF	Transistor 2SC1313	2
Q07	TNN-2SB536--K	Transistor 2SB536	1
Q08	TNN-2SD381--K	Transistor 2SD381	1
Q09,15	TTT-2SA483--O	Transistor 2SA483	2
Q10,14	TTT-2SC783--O	Transistor 2SC783	2
	131 2 4208 20910	Transistor spacer	4
	131 2 6108 11201	Cover sever	6
	131 2 6201 20400	Heat sink	2
Q06,12	203 5 4600 87550	Transistor 2SC875	2
Q11	203 5 6900 40050	Transistor 2SD400	1
Q05,13	203 5 7100 53250	Transistor 2SA532E	2
D01,02, 03,04	205 5 9040 44210	Diode DS-442	4

MAIN AMP PCB ASSY BOTTOM VIEW



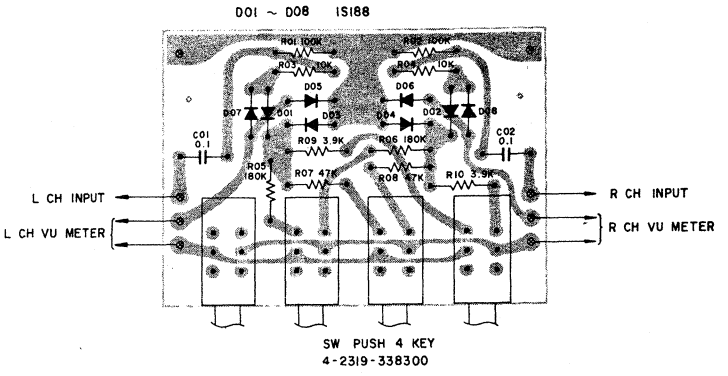
Q01 , 02	2SC1313S	F or G
Q03 , 04	2SA726S	F or G
Q05 , 13	2SA532	E or F
Q06 , 12	2SC875	E or F
Q07	2SB536	K or L
Q08	2SD381	K or L
Q09 , 15	2SA483	O or Y
Q10 , 14	2SC783	O or Y
Q11	2SD400	D or E
D01 , 02	DS-442	

PARTS LIST

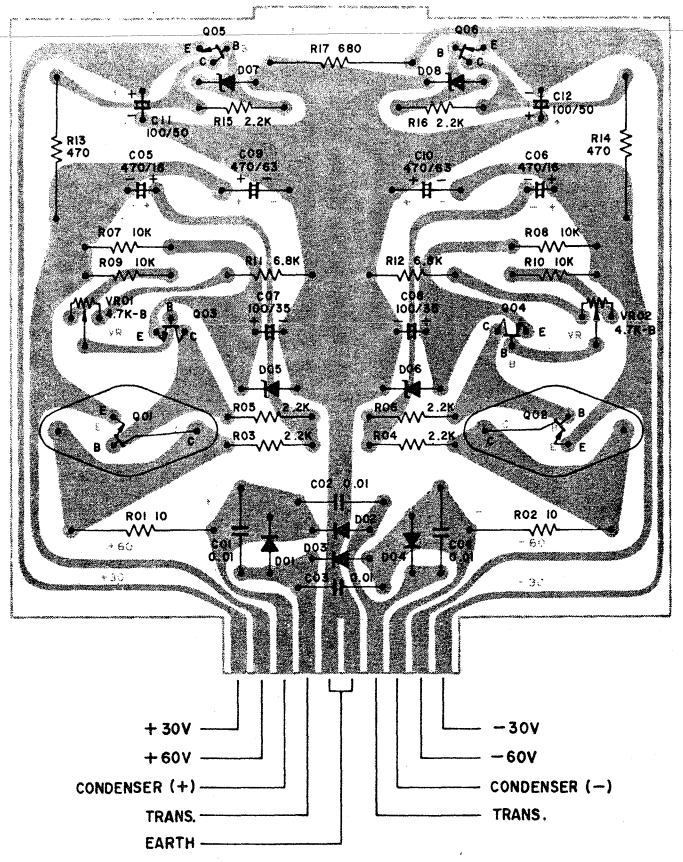
Ref. No.	Part No.	Description	Q'ty
POWER SUPPLY ASSY			
82	131 0 4001 61800	Power supply PCB assy	1
VR01,02	4 2229 24490	Variable resistor	2
C05,06	C1CRB-477A--	Elect 470MF 16V	2
C11,12	C1HRB-107A--	Elect 100MF 50V	2
C09,10	C1JRB-477A--	Elect 470MF 63V	2
C07,08	C1VRB-107A--	Elect 100MF 35V	2
C01,02, 03,04	C2DNRM103C--	PP 0.01MF 200V ±20%	4
D01,02, 03,04	DCC-10D2-----	Diode 10D2	4
D07,08	DJJ-BZ-310---	Zener Diode BZ-310	2
D05,06	DJJ-WZ-260---	Zener Diode WZ-260	2
R07,08, 09,10	R2HDPJ103A	Carbon 10K ohm 1/2W ±5%	4
R03,04, 05,06 15,16	R2HDPJ222A	Carbon 2.2K ohm 1/2W ±5%	6
R11,12	R2HDPJ682A	Carbon 6.8K ohm 1/2W ±5%	2
R01,02	R3HEPK100A	Cemen 10 5W ±10%	2
R13,14	R3HEPK471A	Cemen 470 5W ±10%	2
R17	R3HEPK681A	Cemen 680 5W ±10%	1
	131 2 4208 20910	Transistor spacer	2
	131 2 6108 11201	Cover sever	10
Q03	203 5 4600 87550	Transistor 2SC875	1
Q02	203 5 6450 50940	Transistor 2SB509	1
Q06	203 5 6460 51440	Transistor 2SB 514	1
Q04	203 5 7100 53250	Transistor 2SA 532	1
Q05	203 5 8220 33040	Transistor 2SD 330	1
Q01	203 5 8410 31540	Transistor 2SD315	1

Ref. No.	Part No.	Description	Q'ty
METER RANG ASSY			
83	131 0 4001 61900	Meter rang PCB assy	1
	4 2319 33830	Switch push 4key	1
C01,02	C1HFRM104A--	Mylar 0.1MF 50V ±20%	2
R03,04	R2EDSJ103A	Carbon 10K ohm 1/4W ±5%	2
R01,02	R2EDSJ104A	Carbon 100K ohm 1/4W ±5%	2
R05,06	R2EDSJ184A	Carbon 180K ohm 1/4W ±5%	2
R09,10	R2EDSJ392A	Carbon 3.9K ohm 1/4W ±5%	2
R07,08	R2EDSJ473A	Carbon 47K ohm 1/4W ±5%	2
D01,02, 03,04, 05,06, 07,08	202 5 9110 18820	Diode 1S 188FM	8

METER RANG PCB ASSY BOTTOM VIEW



POWER SUPPLY PCB ASSY BOTTOM VIEW



Q01	2SD315	D or E
Q02	2SB509	D or E
Q03	2SC875	E or F
Q04	2SA532	E or F
Q05	2SD330	D or E
Q06	2SB514	D or E

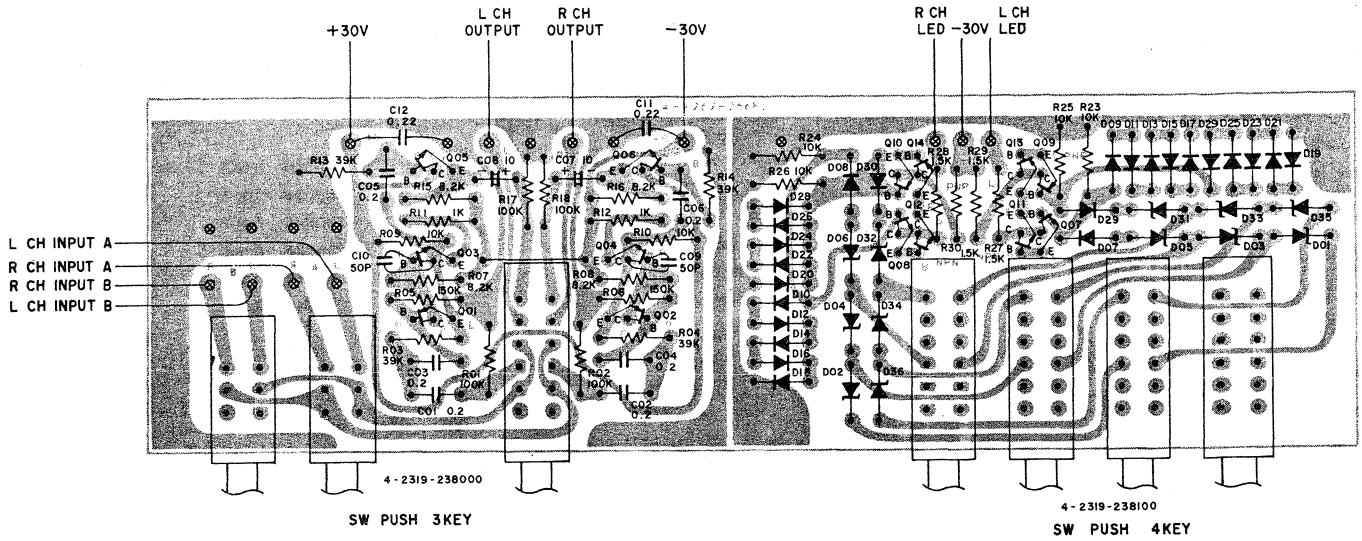
D01 ~ 04	10D2
D05 , 06	WZ-260
D07 , 08	BZ-310

PARTS LIST

Ref. No.	Part No.	Description	Q'ty
FILTER & LIMITER ASSY			
84	131 0 4001 62000	Filter and limiter PCB assy	1
	4 2319 23800	Switch push 3key, Input	1
	4 2319 23810	Switch push 4key, Power limiter	1
C07,08	C1ATRM106A--	Tantal 10MF 10V ±20%	2
C09,10	C1HCSK500SL-	Ceramic 50PF 50V ±10%	2
C01,02, 03,04 05,06	C1HFRJ204A--	Mylar 0.2MF 50V ±5%	6
C11,12	C1HFRM224A--	Mylar 0.22MF 50V ±20%	2
D01,02, 03,04 33,34, 35,36	DJJ-WZ-110---	Zener Diode WZ-110	8
D05,06, 31,32	DJJ-WZ-260---	Zener Diode WZ-260	4
R19,20, 21,22	R2EDSJ101A	Carbon 100 ohm 1/4W ±5%	4
R11,12	R2EDSJ102A	Carbon 1K ohm 1/4W ±5%	2
R23,24, 25,26 09,10	R2EDSJ103A	Carbon 10K ohm 1/4W ±5%	6
R01,02, 17,18	R2EDSJ104A	Carbon 100K ohm 1/4W ±5%	4
R27,28, 29,30	R2EDSJ152A	Carbon 1.5K ohm 1/4W ±5%	4
R05,06	R2EDSJ154A	Carbon 150K ohm 1/4W ±5%	2

Ref. No.	Part No.	Description	Q'ty
FILTER & LIMITER ASSY			
R03,04, 13,14	R2EDSJ393A	Carbon 39K ohm 1/4W ±5%	4
R07,08, 15,16	R2EDSJ822A	Carbon 8.2K ohm 1/4W ±5%	4
Q09,10, 13,14	TMM-2SA628--E	Transistor 2SA628	4
Q01,02	TMM-2SA726--F	Transistor 2SA726	2
Q03,04, 05,06	TMM-2SC1313-F	Transistor 2SC1313	4
Q07,08, 11,12	TMM-2SC711--E	Transistor 2SC711	4
D07,08, 09,10, 11,12, 13,14, 15,16, 17,18, 19,20, 21,22, 23,24, 25,26, 27,28, 29,30	205 5 9040 44210	Diode DS-442	24

FILTER & LIMITER PCB ASSY BOTTOM VIEW



Q01 , 02	2	2SA726 (F or G)
Q03 ~ 06		2SC1313 (F or G)
Q07 , 08 , 11 , 12		2SC711 (E or F)
Q09 , 10 , 13 , 14		2SA628 (E or F)
D01 ~ 04 , 33 ~ 36		WZ-110
D05 , 06 , 31 , 32		WZ-260
D07 ~ 30		DS-442

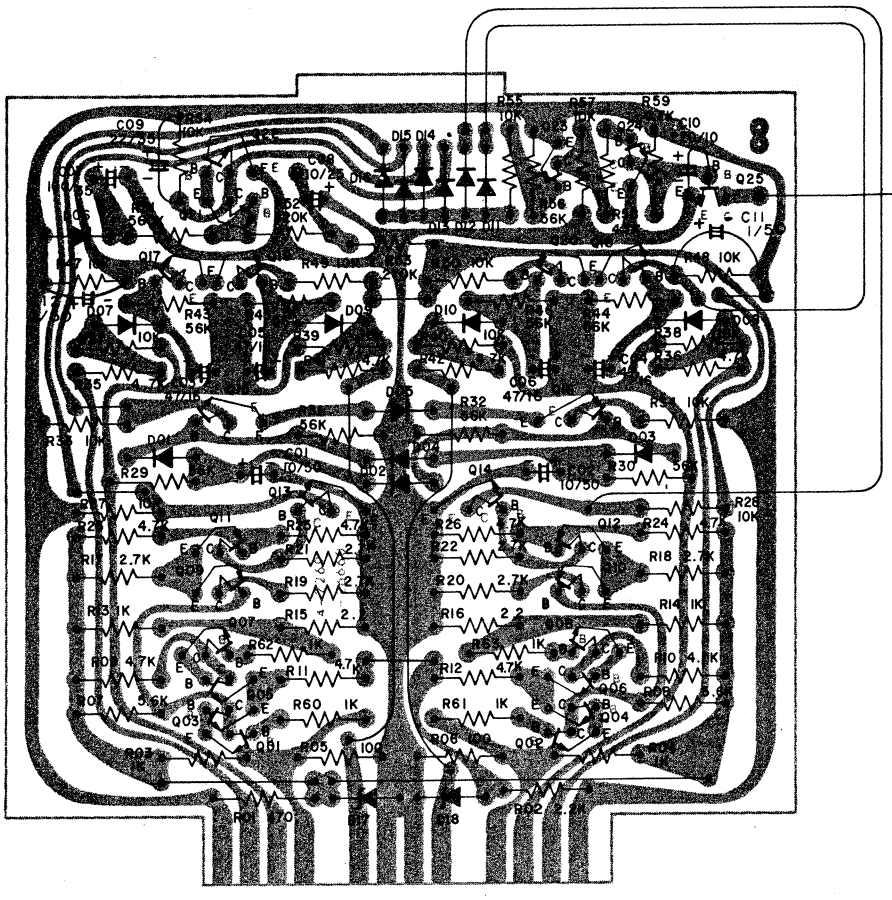
PARTS LIST

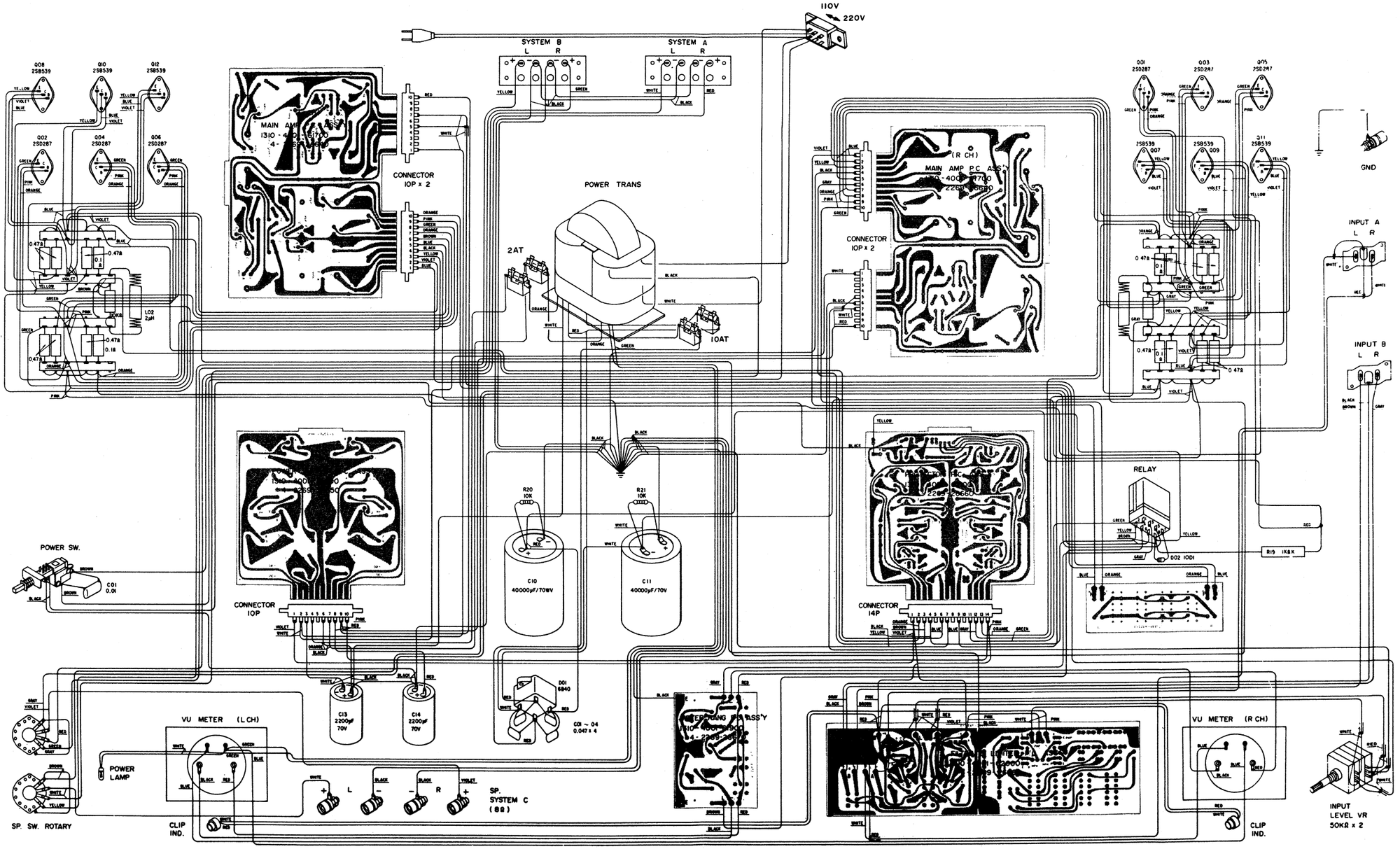
Ref. No.	Part No.	Description	Q'ty
PROTECTOR ASSY			
85	131 0 4001 62100	Protector PCB assy	1
C10	C1ARE-227A--	Elect 220MF 10V	1
C03,04, 05,06	C1CRB-476A--	Elect 47MF 16V	4
C08	C1ERB-106A--	Elect 10MF 25V	1
C01,02	C1HAB-106A--	Elect 10MF 50V	2
C11,12	C1HRB-105A--	Elect 1MF 50V	2
C07	C1VRB-107A--	Elect 100MF 35V	1
C09	C1VRE-226A--	Elect 22MF 35V	1
D06	DCC-10D1-----	Diode 10D1	1
D17,18	DJJ-WZ-090---	Zener Diode WZ-090	2
R05,06	R2EDSJ101A	Carbon 100 ohm 1/4W ±5%	2
R03,04, 13,14, 60,61, 62,63	R2EDSJ102A	Carbon 1K ohm 1/4W ±5%	8
R27,28, 33,34, 37,38, 39,40, 47,48, 49,50, 54,55, 57	R2EDSJ103A	Carbon 10K ohm 1/4W ±5%	15
R15,16	R2EDSJ2R2A	Carbon 2.2 ohm 1/4W ±5%	2
R02	R2EDSJ222A	Carbon 2.2K ohm 1/4W ±5%	1
R52	R2EDSJ224A	Carbon 220K ohm 1/4W ±5%	1
R17,18, 19,20, 21,22	R2EDSJ272A	Carbon 2.7K ohm 1/4W ±5%	6
R53	R2EDSJ274A	Carbon 270K ohm 1/4W ±5%	1
R09,10, 11,12, 23,24, 25,26, 35,36, 41,42, 58,59	R2EDSJ472A	Carbon 4.7K ohm 1/4W ±5%	14
R07,08	R2EDSJ562A	Carbon 5.6K ohm 1/4W ±5%	2

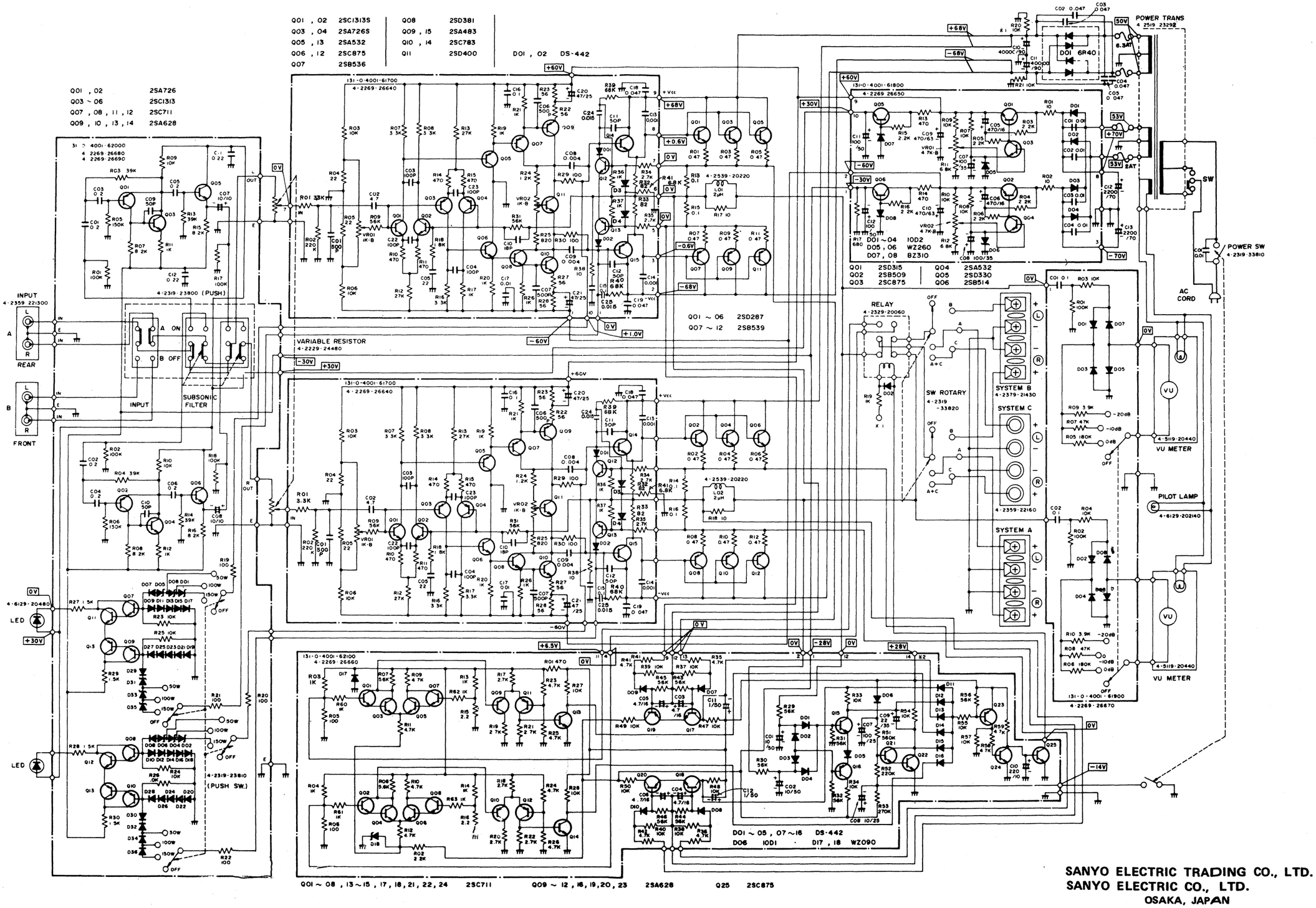
Ref. No.	Part No.	Description	Q'ty
PROTECTOR ASSY			
R29,30, 31,32, 43,44, 45,46, 56	R2EDSJ563A	Carbon 56K ohm 1/4W ±5%	9
R51	R2EDSJ564A	Carbon 560K ohm 1/4W ±5%	1
R01	R2HDPJ471A	Carbon 470 ohm 1/2W ±5%	1
Q09,10, 11,12, 16,19, 20,23,	TMM-2SA628--E	Transistor 2SA628	8
Q01,02, 03,04, 05,06, 07,08, 13,14, 15,21, 22,17, 18,24	TMM-2SC711--E	Transistor 2SC711	16
	131 2 4208 20910	Transistor spacer	1
Q25	203 5 4600 87540	Transistor 2SC875	1
D01,02, 03,04, 05,07, 08,09, 10,11, 12,13, 14,15, 16	205 5 9040 44210	Diode DS-442	15
ACCESSORIES			
	4 2369 20940	Plug, Red	2
	4 2369 20941	Plug, Black	2
	131 0 4004 13200	Wire shield assy	1
	131 6 2119 00250	Bag polyethylene exp	1
	131 6 2519 01300	Bag polyethylene ind	1
	131 6 2719 10600	Bag fan	1
	131 6 4119 40202	Explanatory booklet	1

PROTECTOR PCB ASSY BOTTOM VIEW

Q01 ~ 08, Q13 ~ 15, Q17 , 18, Q21 , 22, Q24	2SC711 E or F
Q09 ~ 12, Q16 , 19, Q20 , 23	2SA628 E or F
Q25	2SC875 D or E
D01 ~ 05, D07 ~ 10, D11 ~ 16	DS-442
D06	10D1
D17 , 18	WZ-090




110V
220V
SYSTEM B
L R
SYSTEM A
L R
Q08 2SB539
Q10 2SB539
Q12 2SB539
Q02 2SD287
Q04 2SD287
Q06 2SD287
MAIN AMP P.C. ASS'Y
1310-4003-7700
4-2269-20660
CONNECTOR 10P x 2
POWER TRANS
2AT
10AT
(R CH)
MAIN AMP P.C. ASS'Y
1310-4003-7700
2269-20660
CONNECTOR 10P x 2
Q01 2SD287
Q03 2SD287
Q05 2SD287
2SB539 Q07
2SB539 Q09
Q11 2SB539
GND
INPUT A
L R
INPUT B
L R
R20 10K
R21 10K
C10 40000μF/70WV
C11 40000μF/70V
CONNECTOR 14P
RELAY
Q02 1QD1
R19 1KBK
POWER SW.
C01 0.01
CONNECTOR 10P
C13 2200μF 70V
C14 2200μF 70V
D01 6840
C01 ~ 04 0.047 x 4
VU METER (L CH)
POWER LAMP
SP. SW. ROTARY
CLIP IND.
L
R
SP. SYSTEM C (8Ω)
VU METER (R CH)
CLIP IND.
INPUT LEVEL VR 50KΩ x 2



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OSAKA, JAPAN

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